REMARKS

Favorable reconsideration of this application is respectfully requested.

Claims 1-6 are pending in this application. Claims 1-6 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. patent 5,617,312 to Iura et al. (herein "Iura") in view of U.S. patent 5,317,140 to Dunthorn. That rejection is traversed by the present response as discussed next.

Initially, applicant notes the claims are amended by the present response to clarify a feature therein. Specifically, independent claim 1 now clarifies an operation of extracting a predetermined object from an image including the predetermined object above a plane of the display "and a plane of the object". Independent claims 3 and 5 are also amended by the present response to recite a similar feature. In the present invention, as an image on a plane of a touch panel or display is captured by a camera, the image captured by the camera also includes "a plane of the display". Such a feature even further distinguishes the claims over the applied art.

The outstanding rejection relies on Iura to disclose extracting a predetermined object above a plane of the display. Iura, however, clearly does not disclose or suggest any operation in which additionally to extracting the predetermined object, "a plane of the display" is also extracted. As noted above, in the claimed invention cameras can capture an image on a plane of a display, and thereby also capture "a plane of the display". In contrast to that claim feature, Iura mounts a single camera 100 to face out from a front of a computer, and thereby that camera 100 clearly cannot extract "a plane of the display". That camera in Iura faces away from the plane of the display, and could not be modified in any manner to extract "a plane of the display". Thereby, the above-noted feature now clarified in each of independent claims 1, 3, and 5, and the claims dependent therefrom, further distinguishes the claims over Iura.

Moreover, applicant respectfully submits the outstanding rejection is misconstruing

the disclosure in <u>Iura</u> relative to other of the claimed features as <u>Iura</u> does not disclose, and it

would not be inherent in <u>Iura</u>, to determine whether a predetermined object is within a

predetermined distance from a display, and to make a detection when the object is determined

to be within that distance, as discussed in further detail below.

Independent claim 1 recites:

> A method for inputting information including
> coordinate data, comprising:
>
> providing at least two cameras at respective corners of a
> display;
>
> extracting, based on outputs from the at least two
> cameras, a predetermined object from an image including the
> predetermined object above a plane of the display and a plane
> of the display;
>
> ***determining whether the predetermined object is
> within a predetermined distance from the plane of the display;***
>
> detecting, based on outputs from the at least two
> cameras, a position of the predetermined object *while the
> predetermined object is determined to be within a
> predetermined distance from the plane*;
>
> calculating angles of views of each of the at least two
> cameras to the detected position; and
>
> calculating coordinates of the predetermined object on
> the display panel utilizing the calculated angles. [Emphasis
> Added]

As noted above, independent claim 1 recites "determining whether the predetermined

object is within a predetermined distance from the plane of the display". The other

independent claims recite a similar feature. That claimed feature is noted in the specification

for example at step S103 in Figure 6 and the corresponding discussion in the present

specification at page 12, lines 12-21.

According to the claimed invention, coordinates of a predetermined object inserted above a plane of a display can be detected. One feature in the claimed invention is to determine when an object is close enough to a plane so that its motion can be detected. That motion can then later be used to determine coordinates of the predetermined object. The claimed invention also utilizes two cameras at respective corners of a display to calculate coordinates of the predetermined object.

Applicant submits Iura does not disclose or suggest "determining whether the predetermined object is within a predetermined distance from the plane of the display" as specifically recited in independent claim 1 and as similarly recited in the other independent claims.

In that respect applicant also notes Dunthorn does not disclose or suggest the above-noted feature of "determining whether the predetermined object is within a predetermined distance from the plane of the display". Dunthorn was merely cited to disclose the use of cameras at respective corners of a display device and to determine the position of an object based on triangulation. Thus, Dunthorn does not cure the above-discussed deficiencies of Iura.

Moreover, applicant submits the primary applied art to Iura not only does not disclose or suggest the above-noted claim feature, but actually *teaches away from* that claim limitation. Thus, not only is such a feature *not inherent* in Iura, but Iura could not even have been modified to meet the above-noted claim feature.

Iura is directed to a different type of device than in the claimed invention. As shown for example in Figure 2 Iura mounts a single camera 100 to face the *front* of a computer, and not at a corner of a display.

Iura has no operation and would have no reason to determine when an object is a predetermined distance from a plane of a display. Iura utilizes the front facing camera 100 to

look at the motion of a person, but in <u>Iura</u> a motion relative to a plane of a display is completely irrelevant. Therefore, <u>Iura</u> does not disclose or suggest, and actually teaches away from, "determining whether the predetermined object is within a predetermined distance from the plane of the display" and detecting an object's position "while the predetermined object is within a predetermined distance from the plane" of the display.

In such ways, <u>Iura</u> does not teach or suggest features clarified in the claims, and actually teaches away from such features. Thereby, <u>Iura</u> could not have been modified in any manner to meet the claim limitations regardless of any disclosure in <u>Dunthorn</u>.

In addressing the above-noted features, the outstanding rejection states:

> 3.   Applicant's arguments filed 1/19/07 have been fully considered but they are not persuasive. Applicant in his remarks has argued that "Iura et al utilize the front facing camera (100) to look at the motion of a person, but in Iura a motion relative to a plane of a display is completely irrelevant. Therefor, Iura does not disclose or suggest, and actually teaches away from, determining whether the predetermined object is within a predetermined distance from the plane of the display. As pointed out above, such is inherently also the case in Iura et al because their system like the presently claimed inventions use camera having an extracting feature for determining the location of a predetermined object (e.g., finger or pen) above the plane of the display, as opposed to conventional scanning light beams or acoustic waves touch panels which require detection of an actual touchdown on the display. Thus, the touch detection system of Iura et al like the presently claimed inventions determine the location of a predetermined object within a predetermined distance above the plane of the display device.

The above-noted basis for the rejection is misconstruing the teachings in <u>Iura</u> relative to the claims.

First, it is clearly ***not inherent*** in every device that includes a camera in a coordinate data determining device to "determine whether the predetermined object is within a predetermined distance from the plane of the display". The claims are directed to such a feature, as noted above, so that only when the object is close enough to the plane is the

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position of the object detected. Moreover, applicant notes clearly cameras can be used in different ways, as is believed to be clear if one understands the present invention and Iura.

The present invention provides cameras at corners of a display and can detect objects as they approach a display and get within a certain distance from a display.

Iura does *not* place cameras at the corners of a display, but instead as clearly shown for example in Figure 2 in Iura, the camera 100 *faces directly outward* from a display. With that structure not only is it not inherent in Iura to detect when an object is within a predetermined distance from a plane of the display, but Iura could not even operate in that way. The front facing camera in Iura is not designed to operate as the cameras in the claimed invention.

The outstanding rejection is clearly misconstruing the operation of the cameras in the present invention, which clearly differ from the operation of the camera in Iura. The Office Action appears to be focusing only on the broad fact that both the present invention and Iura use cameras.

As also discussed above, Iura detects a position, for example an operator's hand, as the operator is facing a display, see for example Figure 4 in Iura. Iura does not address at any point determining how close to a display the operator's hand is; as again shown in Figure 4 in Iura only the position of the hand within a grid is determined, which again has no relevance to whether the operator's hand is within a certain distance from the display.

Applicant also points out the basis for the rejection has not pointed to any disclosure in Iura to meet the claimed limitations. Again, applicant reiterates it is clearly not the case that all systems utilizing a camera to extract a position of an object operate in the same way. The claimed invention takes a completely different approach than in Iura, which is further evidence that Iura clearly does not inherently meet the claimed limitations.

In view of the foregoing comments applicant respectfully submits the claims as written distinguish over the outstanding grounds for rejection.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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